## Claims

- [c1] A method usable with a subterranean well, comprising: deploying a spring downhole; energizing the spring; and
- [c2] The method of claim 1, wherein the energizing the spring comprises: energizing a coil spring.
- [c3] The method of claim 1, further comprising: using a spring that has a wall thickness that increases from a point near the end of the spring to a point near a midpoint of the spring.
- [c4] The method of claim 1, further comprising: energizing the spring before running the spring down-hole.
- [c5] The method of claim 4, further comprising: releasing the spring from an unenergized state to form the annular barrier.
- [c6] The method of claim 4, wherein the energizing the spring comprises:

  twisting the spring to reduce a diameter of the spring

- while maintaining the spring at the same axial length.
- [c7] The method of claim 6, wherein the twisting comprises: twisting the spring consistent with a helical orientation of the spring.
- [08] The method of claim 4, wherein the spring has an axial length and the energizing the spring comprises: pulling the spring to energize the spring.
- [09] The method of claim 4, wherein the energizing the spring comprises:

  twisting the spring from a direction opposite from a direction defined by a helical orientation of the spring.
- [c10] The method of claim 1, further comprising: energizing the spring after running the spring downhole.
- [c11] The method of claim 10, further comprising: energizing the spring using sleeves to compress the spring.
- [c12] The method of claim 1, further comprising: deploying the spring around a wedge.
- [c13] The method of claim 12, further comprising: using a wedge whose wall thickness is tapered so that the wall thickness is near a maximum near a midpoint of the wedge.

- [c14] The method of claim 12, further comprising: deploying a wedge that comprises the spring along a spring.
- [c15] The method of claim 1, further comprising: providing an elastomer sleeve around the spring.
- [c16] A method usable with a subterranean well, comprising: forming a helical groove in a tubular member to form a spring that is used to expand in the subterranean well to form an annular barrier.
- [c17] The method of claim 16, further comprising: longitudinally varying a profile of the tubular member to form the spring.
- [c18] The method of claim 17, wherein the varying comprises: making a wall thickness of the tubular member smaller near a midpoint of the spring than near an end of the spring.
- [c19] The method of claim 17, wherein the varying comprises: varying a winding density of the groove.
- [c20] The method of claim 19, wherein the varying the winding density of the groove comprises:

  forming a higher density of windings of the groove near a midpoint of the spring than near an end of the spring.

- [c21] An apparatus usable in a subterranean well, comprising: a spring adapted to expand to form an annular barrier in the well.
- [c22] The apparatus of claim 21, wherein the spring comprises: a tubular member having a helical groove.
- [c23] The apparatus of claim 22, wherein a profile of the tubular member varies along a longitudinal length of the spring.
- [c24] The apparatus of claim 23, wherein a thickness of the tubular member is thinner near a midpoint of the spring than near an end of the spring.
- [c25] The apparatus of claim 22, wherein an angle of the helical groove varies along a length of the spring.
- [c26] The apparatus of claim 25, wherein the tubular member has a higher density of windings of the helical groove near a midpoint of the tubular member than near an end of the tubular member.
- [c27] The apparatus of claim 21, further comprising: a sealing sleeve circumscribing the spring.
- [c28] The apparatus of claim 27, wherein the sealing sleeve

- comprises an elastomer sleeve.
- [c29] The apparatus of claim 21, further comprising: a wedge circumscribed by the spring and adapted to exert a radial force to expand the spring.
- [c30] The apparatus of claim 29, wherein the wedge comprises another spring.
- [c31] The apparatus of claim 30, wherein said another spring comprises a winding that has an opposite orientation than a winding of the first spring.
- [c32] A system usable in a subterranean well, comprising:
  a string adapted to be run into a wellbore of the well;
  and
  a spring adapted to expand to form an annular barrier in the well.
- [c33] The system of claim 32, wherein the spring comprises: a tubular member having a helical groove.
- [c34] The system of claim 33, wherein a profile of the tubular member varies along a longitudinal length of the spring.
- [c35] The system of claim 33, wherein a thickness of the tubular member is thinner near a midpoint of the spring than near an end of the spring.

- [c36] The system of claim 33, wherein an angle of the helical groove varies along a length of the spring.
- [c37] The system of claim 33, wherein the tubular member has a higher density of windings of the helical groove near a midpoint of the tubular member than near an end of the tubular member.
- [c38] The apparatus of claim 32, further comprising: a sealing sleeve circumscribing the spring.
- [c39] The apparatus of claim 38, wherein the sealing sleeve comprises an elastomer sleeve.
- [c40] The apparatus of claim 32, further comprising: a wedge circumscribed by the spring and adapted to exert a radial force to expand the spring.
- [c41] The apparatus of claim 40, wherein the wedge comprises another spring.
- [c42] The apparatus of claim 41, wherein said another spring comprises a winding that has an opposite orientation than a winding of the first spring.
- [c43] An apparatus usable with a wellbore of a subterranean well, the wellbore having a minimum open hole inner diameter, the apparatus comprising:

  a base pipe;

a spring mounted to the base pipe; and an outer sealing element at least partially surrounding the spring, wherein the sealing element in a relaxed state of the spring has an outer diameter larger than the minimum open hole inner diameter.

- [c44] The apparatus of claim 43, wherein the spring comprises:

  a tubular member having a helical groove.
- [c45] The apparatus of claim 44, wherein a profile of the tubular member varies along a longitudinal length of the spring.
- [c46] The apparatus of claim 44, wherein a thickness of the tubular member is thinner near a midpoint of the spring than near an end of the spring.
- [c47] The apparatus of claim 44, wherein an angle of the helical groove varies along a length of the spring.